

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Michael Skopec
Serial No.: 10/735,533
Atty Docket: R026 P00745-US1
Filed: 12/12/2003
Title: LOW-LATENCY METHOD TO REPLACE SQL INSERT FOR BULK DATA TRANSFER TO RELATIONAL DATABASE

Examiner: Sathyanarayan R. Pannala
Art Unit: 2164

PRE-APPEAL BRIEF REQUEST FOR REVIEW

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Sir:

Applicant hereby requests review of the rejection in the above-identified application. No amendments are being filed with this request.

This request is being filed with a notice of appeal.

The review is requested for the reasons stated on the attached sheets.

Respectfully submitted,

/Joshua A. Stockwell/

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REMARKS

The Examiner rejected claims 1-7 under 35 U.S.C. § 102(e) as being anticipated by U.S.

Patent No. 6,453,314, issued to Chan. Specifically, the Examiner stated:

As per independent claim 1, Chan teaches a method and for use in a database management system for managing a database containing data and has storage for data in the database (col. 12, lines 14-19). Chan teaches the claimed, providing a database capable of having record data loaded therein (Fig. 3, 9a, col. 12, lines 35-40). Chan teaches the claimed, providing a computer's main memory (Fig. 3, col. 6, lines 38-43). Chan teaches the claimed, providing record data for loading into the database and the record data residing in the computer's main memory (Fig. 3, col. 6, lines 38-43). Chan teaches the claimed, invoking a coordinating program (Fig. 3, col. 6, lines 44-45). Chan teaches the claimed, invoking a load utility program that issues record data input requests, opens record data from external media and loads record data to the database therefrom and the load utility having a required syntax (Fig. 3, col. 12, lines 60-63). Chan teaches the claimed, with the coordinating program, intercepting record data input requests from external media made by the load utility program (Fig. 3, col. lines 38-43). Chan teaches the claimed, replacing the record data input request from external media with record data input requests from the computer's main memory (Fig. 9b, 11, col. 13, lines 42-49). Chan teaches the claimed, inserting record data from the computer's main memory directly into the database by the load utility and whereby delays encountered by reading of input files on the external media by the load utility is avoided (Fig. 3, 11, col. 6, lines 38-43 and col. 13, lines 45-49).

The Applicant respectfully disagrees. Chan does not disclose the use of a separate coordinating program which intercepts data input requests made by the load utility program. Although Col 6, lines 38 to 43 and 44-45 of Chan refers to a “control program” as initiating and controlling the bulk data load, this component is the same prior art component that the applicant refers to as “the load utility program” as in paragraph [0009] of Applicant's specification.

Chan makes no reference to another coordinating program capable of intercepting data input commands from the control program.

Moreover, Chan makes no reference to the data requests being redirected from data stored on slower mass storage devices to data stored in faster memory.

These limitations are directly claimed in independent claim 1 and are not described in the sections of Chan that the Examiner purports to anticipate.

In fact, Chan specifically details in Col. 12, lines 36-38 that the data it is bulk loading is originating from mass storage. Specifically Chan states (emphasis added):

Referring to FIG. 9(a) which depicts a flow chart of a process in accordance with the invention for bulk loading of data into a table T_i and checking it, the process is started by the bulk loading of one or more tables (T_i) in a mass storage 82 (of FIG. 3) as shown in step 130. The table T_i will be placed in a pending state until constraints are checked.

This fact is not surprising considering that the parts of Chan that the Examiner cites describe prior art techniques of loading bulk data into a database, which are the same techniques described as prior art in the “Background of the Invention” section of the present application. The focus of Chan is on what occurs after the bulk data load, i.e. constraint processing, which Chan describes in great detail. Chan does not care or even discuss the actual bulk data load. Chan focuses on the constraint processing, which occurs after the data load.

The Examiner asserts that Fig. 9b and 11 accompanying col. 13 lines 42-49, disclose the step of replacing the record data input request from external media with record data input requests from the computer's main memory. However, referencing these sections of Chan, we find that Chan is describing bulk loading of table data that is split across multiple partitions from mass storage. (Col. 12, lines 36-38). In fact, Chan goes on to state in Col. 13, lines 45-59 that (emphasis added):

During the bulk load process data is divided up among table partitions (see FIG. 11) of the database system by the database

management system according to its normal operating procedure which will be readily understood by those skilled in the art in database field.

Chan does not describe the technique of redirecting these date load requests from data stored in slower mass storage devices, such as hard disks, to data already stored in faster computer memory.

The heart of the present invention is the use of a coordinating program in addition to the control program or load utility program to bulk load the data. The coordinating program of the present invention intercepts the data load requests for data in mass storage from the control program and redirects them to data that is stored in memory. This limitation is specifically claimed in independent claim 1. As can readily ascertained, redirecting data load requests to data already in memory necessarily speeds up the bulk data load because mass storage devices do not need to be accessed, which, because they are electro-mechanical devices, are necessarily slower than the solid-state circuitry used in computer memories.

Accordingly, because Chan does not disclose the use of a separate coordinating program which intercepts and redirects record data input requests from a load utility program, Chan does not anticipate the claims of the present invention.

Therefore, the Applicant respectfully solicits reconsideration of the pending claims.

III. Conclusion

Ultimately, Chan states that a bulk data load occurs, but never describes the technique of the bulk data load. Moreover, Chan specifically states that the bulk data load is occurring from mass storage, rather than being redirected to data previously stored in memory.

In view of the foregoing, the Applicant respectfully solicits reconsideration of the pending claims.

The USPTO is authorized to charge any additional fees incurred as a result of the filing hereof or credit any overpayment to our account #02-0900.

Respectfully submitted,

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